

was broken off in some great convulsion of the earth's surface. This had been separated from the main crystal by a piece of orthoclase that had unmistakably been formed since the rupture of the crystal. Such a fact is of great importance in studying the geological history of the formation. The locality is Brudinnelle, Renfrew Co., Ontario, Canada, and the rock is a vein of pink feldspar in a Laurentian gneiss. It is associated with sphene and crystals of peristerite (?). Some of the faces of the latter show the moonstone reflections very plainly. Cavities once filled with calcite (now mostly dissolved away) occur in the vein. There are also some small crystals that need further examination.

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AUGUST 19.

Mr. J. H. REDFIELD in the chair.

Fifteen persons present.

The death of W. L. Schaeffer, a member, was announced.

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AUGUST 26.

Mr. J. H. REDFIELD in the chair.

Fourteen persons present.

The death of James L. Claghorn, a member, was announced.

Edward P. Bliss and Ralph W. Seiss, M.D., were elected members.

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SEPTEMBER 2.

Rev. H. C. McCook, D. D., Vice-President, in the chair.

Twenty-one persons present.

*On the wide Distribution of some American Sponges.*—Allusion having been made to the wide distribution of certain species of spiders over the North American continent, Mr. E. POTTS, referring to the fresh-water sponge fauna of this country, said, that *Spongilla fragilis*, the first species named in America, described by Dr. Leidy in 1851 from specimens collected near Philadelphia, had since been found abundantly along the Atlantic coast from Florida to Nova Scotia. It had been gathered at several points along the St. Lawrence and in the great lakes, through the middle continent, and in the far west had been described by Dr. Bowerbank, in 1863, under the name of *S. Lordii*, as found in the lakes and streams flowing from the Cascade Range in British Columbia,

affluents of the majestic Columbia River. The species may, therefore, be regarded as strictly continental in its range, and until very recently it has been distinctively American. It is a little singular that the only other place in which it has been noticed is in the neighborhood of Charkow, in Russia, where it was discovered, a few months since, by Dr. L. Dybowski.

The specimens of this species from Nova Scotia had been collected by Mr. A. H. Mackay, B. A., B. S., of Pictou Academy, Pictou, N. S., from whom the speaker had recently received a collection of sponges, phenomenal in its character, both as regards the number of genera and species represented, and the excellent judgment that had attached to most of them their proper names, from apparently very insufficient data. The collection was the result of few days' search within a limited district, "from lakes in and near the water shed of Nova Scotia, near the borders of the three counties of Pictou, Guysboro and Antigonish," at elevations of from 100 to 700 feet above sea level. Of the genus *Spongilla*, it contains three species, *S. lacustris*, *S. fragilis*, and *S. iglooiformis*; of the genus *Meyenia*, two species, *M. fluviatilis* and *M. Everetti*; of the genus *Heteromeyenia*, two, *H. argyrosperma* and *H. Ryderi*, and of the genus *Tubella*, one species, *T. Pennsylvanica*—eight species, representing four genera. Besides these there were small specimens of another species, evidently new, but whose genus relations could not be determined on account of the absence of statoblasts.

In some respects the most important find in the collection is *Meyenia Everetti* Mills; this being only the second instance in which the species has been discovered. The original locality was Gilder Pond upon Mt. Everett, in Berkshire Co., Mass., at an elevation of 1800 or 2000 feet above the sea. It was there collected by Dr. F. Wolle and Mr. H. S. Kitchel of Bethlehem, Pa., well known for their invaluable work among the desmids and diatoms; and examined simultaneously by Mr. H. Mills of Buffalo, N. Y., and the speaker. Its most striking peculiarity is the presence, all through the dermal tissues, of very minute birotulate spicules, the only instance in which these have been observed as characteristic features of the dermal surface in any fresh-water sponges; unless the complicated forms found in *Meyenia plumosa* Carter, may be considered an exception.

These birotulates in the present collection average one-third longer than those before examined, and are in every way more robust. The speaker was gratified in finding this confirmation of a rule which he has long since observed to hold amongst the infinite variations of size and form noticeable in collections of the same species from various localities; viz, that the spicules of all species increase regularly in size and solidity as we descend from high altitudes towards the sea-level, where is found the extreme limit of the series. He does not attribute this gradation to a change of climatic conditions, but more probably to a gradual and con-

stant improvement in the food-supply or in the siliceous constituent of the water. He has traced the workings of the rule more particularly through the very variable species, *Spongilla lacustris* and *S. fragilis*; in *Meyenia fluviatilis*, in *Heteromeyenia argyrosperma* and *H. Ryderi*, and lastly and most conspicuously in *Tubella Pennsylvanica*. The extremes in this last series differ so widely that they would hardly be taken to belong to the same species, but the intermediate grades have all been collected, largely from the same stream; and as a result several species named in this and other cases, have relapsed into synonyms.

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SEPTEMBER 9.

Dr. W. S. W. RUSCHENBERGER, in the chair.

Eleven persons present.

The death of R. E. Rogers, M. D., a member, was announced.

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SEPTEMBER 16.

Rev. H. C. McCook, D. D., Vice-President, in the chair.

Seventeen persons present.

*On the Minute Fauna of Fairmount Reservoir.*—Mr. E. POTTS alluded to the difficulties that ordinarily prevent a thorough study of the fixed aquatic fauna, which he described as thereby generally limited to collections from the shallow water near the margins of lakes and streams, or of such forms as may adhere to the few timbers or stones that can be dragged from a greater depth. He therefore urged the importance of making use of such opportunities as are furnished by the temporary drainage of reservoirs, canals, etc., to examine thoroughly the incrustations upon exposed walls and timbers, or on the bed of the stream.

Such an occasion was afforded a few days since, when the accidental breaking of a valve necessitated the drawing off of the water from the Fairmount reservoirs. These are divided by perpendicular walls, eight or ten feet in height, and, unfortunately, facilities were not at hand in the shape of ladders, planks, etc., to enable him to make a minute examination of them. From the margin, however, could be seen at many places patches of the sponges, *Spongilla fragilis* and *Meyenia fluviatilis*, while the cages over the outlet pipes, and, more strikingly, the walls surrounding the main outlet at the southeast corner, were thickly encrusted with *Meyenia Leidyi*. The last-named sponge is very compact and little liable to crumble during the winter season, so that it is probable that the large masses, some of them nearly an inch in thick-